

sence of some of the remaining acerate spicules left end to end on its surface in a reticulated form, there can be no doubt that it had belonged to a digitate *Chalina*; but, with the exception of a few points, the whole of the fibre of the interior had disappeared, leaving the parts which it had occupied in the form of a reticulated, anastomosing, *empty* tubulation, while the interstices were filled with translucent homogeneous flint-like silex.

Now here is a condition exactly opposite to that presented by the Farrington (Coral-Rag) sponges, in which the *fibre is retained* and the *interstices* more or less *empty*, while the fibre is *calcareous*, and the interstices, where occupied, filled with calcareous material also.

Thus I cannot help thinking that this silicified digital process of a *Chalina* in the Upper Greensand flint might have been calcareous if it had been in the Coral Rag, and therefore that most, if not all, of Prof. Zittel's fossil *Calcispongiæ* may, after further examination, have to be transferred to his other orders; while I know no one would rejoice more to see this effected than Prof. Zittel himself, if the evidence in favour of it warranted the alteration.

Budleigh-Salterton,
Nov. 3, 1879.

LI.—*Descriptions of new Species of Lepidoptera from Japan.*
By ARTHUR G. BUTLER, F.L.S., F.Z.S., &c.

[Continued from p. 374.]

Geometridæ.

68. *Thalera veneta*, n. sp. (no. 425).

Emerald-green: wings crossed just beyond the middle by a white-edged darker line; a very slender bronze-brown marginal line; fringe snow-white, spotted with ferruginous at the terminations of the veins: primaries with a second white line across the basal third; the costa buff-coloured: head bright clay-red; antennæ with golden-yellowish pectinations: thorax, excepting the tegulæ, and abdomen sordid white. Wings below pale sericeous green; primaries with buff-coloured costa: body below sordid white, legs pale buff. Expanse of wings 1 inch 5 lines.

69. *Tanaorhinus prasinus*, n. sp. (no. 431).

Wings above pale pearly grey, with the external border rather broadly sap-green, a discal stripe close to the outer border of the same colour: primaries with the base, costa, and a regularly trifurcate central belt sap-green: secondaries crossed in the middle by a rather broad, straight, central sap-green belt; costal border rather broadly snow-white: thorax green; antennæ with ochraceous pectinations; abdomen cream-coloured. Under surface of wings stramineous, becoming ochraceous upon the costa, the outer border slightly greenish; an indistinct straight postmedian greyish transverse stripe: body white, the anterior coxæ green in front; proboscis ochreous. Expanse of wings 1 inch 10 lines.

Ephyridæ.

70. *Ephyra grata*, n. sp. (no. 470).

Stramineous, the outer borders of the wings golden yellow; a rather broad, internally sinuated, submarginal, purplish-brown belt, the outer edge of which is ragged and divided into short transverse striæ; a postmedian zigzag series of minute black dots; several internal spots and two basal bands grey: body grey, with yellowish head and shoulders. Under surface altogether paler, the black dots obsolete. Expanse of wings 11 lines.

Closely allied to "*Acidalia*" *arata* of Moore. *A. ? trigonata* of Walker is also an *Ephyra*.

Acidaliidæ.

71. *Asthenia auricruda*, n. sp. (no. 438).

Bright buff-yellow: wings crossed by four equidistant, parallel, irregularly zigzag, leaden grey bands; base of primaries also leaden grey: thorax greyish; front of head and centre of antennæ black, vertex and the remainder of antennæ sordid white. Under surface altogether paler; wings whitish, with faint indications of the bands of the upper surface. Expanse of wings 9 lines.

72. *Acidalia impeza*, n. sp. (no. 439).

Pale testaceous: wings with ochraceous fringe; outer border laky purple, leaving the margin near apex of primaries, so that it encloses an oblong marginal spot of the ground-colour; costal margin of primaries tinted with purplish lake; collar of the same tint. Wings below creamy

stramineous, marginal border grey; an indistinct, transverse, central, dusky line, followed by a barely distinguishable irregular discal line. Expanse of wings 9 lines.

Allied to *A. jakima* (Ill. Lep. Het. iii. p. 40, pl. 50. fig. 10).

73. *Acidalia macescens*, n. sp. (no. 448).

Very pale greyish brown: wings with black discocellular dots, immediately followed by a pale sinuous band; this is followed by a broader band, slightly darker than the ground-colour, followed again by a second, sinuous, pale submarginal band; inner edge of the brownish intermediate band traversed by a series of blackish dots; a marginal series of black dots. Under surface whitish, minutely irrorated with brown; discocellular and marginal dots as above; discal band indistinctly seen, its inner edge indicated by a sinuous brown line. Expanse of wings $10\frac{1}{2}$ lines.

74. *Acidalia fœdata*, n. sp. (no. 456).

Shining olivaceous brown; wings with greyish borders, blackish discocellular dots, and a dark grey, subangulated, externo-discal line: thorax greyish; vertex of head white; anus yellowish. Under surface pale shining greyish brown, with indications of the markings of the upper surface. Expanse of wings 10 lines.

75. *Acidalia invalida*, n. sp. (no. 463).

Whity brown, minutely irrorated with darker brown: wings crossed by two sinuous dark-edged bands, one central, the other discal; discocellular spots and marginal dots black. Wings below whitish: primaries with brownish costa; the markings of the upper surface indistinct, the inner edge of the discal band indicated by a series of brown dots: body cream-coloured. Expanse of wings 1 inch.

"*Acidalia*" *defamataria* and "*A.*" *emissaria* of Walker are referable to my genus *Lycauges*.

Caberidæ.

ORTHOCABERA, n. gen.

Nearly allied to *Cabera*, but the costal margin of primaries straighter and longer, the outer margin nearly straight and decidedly longer, the inner margin about the same. Type *O. sericea*.

In marking the type differs from *C. pusaria* (the species which it most resembles) in having most of the lines dupli-

cated and those of the primaries oblique and converging towards the apex.

76. *Orthocabera sericea*, n. sp. (no. 477).

♂. Sericeous snow-white: wings crossed by four bands, the first three of primaries and the third of secondaries formed of double sandy brown lines, tapering and converging towards the apex of the primaries, the first and second of secondaries reduced to single lines of the same colour, the first being quite basal and therefore only just visible; a submarginal line sinuated on the primaries and a marginal line also of the same colour: primaries with a minute dark brown discocellular dot; costal margin slenderly brownish: head and antennæ yellowish. Wings below snow-white, immaculate: primaries with the costa pale golden brown: palpi yellowish; legs varied with dead gold (perhaps due to abrasion). Expanse of wings 1 inch 5 lines.

Macariidæ.

77. *Macaria Pryeri*, n. sp. (no. 494).

Snow-white: wings streaked and mottled with greyish brown, crossed by two sandy brown lines, the first at basal fourth, the second duplicated as far as the second median branch of primaries, where it divides into a fork, the inner branch running through the discocellulars to costa, the outer branch carried on for a short distance and then abruptly elbowed so as to run parallel to the inner one, this outer stripe upon the primaries interrupted by black spots; a broad greyish-brown band almost uniting with the duplicated stripe and sharply angulated externally, divided from the outer border (which is striated with dark brown) by a macular stripe of the ground-colour; a marginal series of black spots: crest of head, antennæ, and collar sandy or golden brown; abdomen pearly white, the anterior segments with black dorsal dots in pairs. Wings below with the lines simple and badly defined, the mottling golden brown. Expanse of wings 1 inch 5 lines.

78. *Macaria irrorata*, n. sp. (no. 496).

Clear sandy yellow, speckled with black: wings with the fringe black-spotted; a small black spot on the discocellulars; a slender, arched, black line, bordered with pale buff, and interrupted by the yellow veins, just beyond the middle; traces of a discal series of black spots, most distinct upon the

primaries; these wings also with a second black arched line near the base. Under surface nearly as above, slightly yellowish. Expanse of wings 1 inch 3 lines.

Allied to *M. indictinaria* of Bremer.

Fidoniidæ.

79. *Lozogramma vapulata*, n. sp. (no. 497).

Whity brown, striated with little dashes of slightly darker brown, two indistinct angulated lines of the same tint across the basal half; a marginal series of black dots: primaries crossed obliquely from inner margin to apex by a darker-edged brown band, which widens abruptly at costal third, and is edged externally with white; an elongated small black spot on the second median interspace; an indistinct submarginal brownish streak: secondaries crossed just beyond the middle by a brown angulated stripe, which tapers to a line as it approaches the costa; an indistinct brownish line half-way between the postmedian stripe and the margin. Wings below white, with the markings of the upper surface sandy yellowish. Expanse of wings 1 inch 5 lines.

This species seems allied to "*Macaria*" *castigataria* of Bremer.

80. *Ozola terranea*, n. sp. (no. 614).

Pale brown, slightly greyish at the outer borders of the wings; a slender dark brown marginal line; a submarginal line formed of series of geminated almost confluent black dots; three parallel, sinuated, discal dusky lines (the two outer ones approximated), crossed by black-spotted median branches and submedian vein: primaries darker than secondaries, the discoidal area and a belt enclosed by the discal lines rust-red; three indistinct, sinuated, dusky lines across the basal area. Wings below pale brown, the secondaries darker and greyer than the primaries; all the discal veins black-spotted; the lines crossing the disk more distinct than above, but the lines crossing the basal area only represented by black spots on the costa of primaries; small blackish discocellular spots: body greyish. Expanse of wings 1 inch.

Larentiidæ.

81. *Emmelesia phasma*, n. sp. (no. 435).

Sericeous white: wings crossed by nine more or less distinct, grey, sinuated lines, the third and fourth and the sixth and seventh from the base approximated, very irre-

gular, and dotted with black; the ninth or submarginal line indistinct; a series of black marginal lunules. Wings below immaculate; anterior coxæ, tibiæ, and tarsi pale golden brown. Expanse of wings 11 lines.

82. *Eupithecia signigera*, n. sp. (no. 574).

Sandy brown, crossed by numerous, parallel, undulated or zigzag, darker brown lines; an interrupted black marginal line: primaries with the costal border almost wholly occupied by five large, black-edged, brown spots, the third and fifth of which are connected with similar subcostal spots above the end of the cell and close to the apex; the first and third of the transverse brown lines expanded into bands; a white-edged black spot at the end of the cell; a submarginal series of externally white-edged black spots, united by longitudinal dashes to the interrupted marginal line: secondaries paler than primaries, the costal half whitish; a blackish discocellular dot; the submarginal zigzag line externally white-edged and terminating at anal angle in a blackish spot: thorax whitish, with dark brown head and collar. Under surface grey, discocellular spots and interrupted marginal line black and sharply defined; transverse lines indistinct, only indicated upon the disk. Expanse of wings 1 inch.

Allied to *E. rufescens* (Ill. Typ. Lep. Het. iii. p. 52, pl. liii. fig. 12).

83. *Eupithecia consueta*, n. sp. (no. 568).

Whitish, crossed by numerous undulated grey lines, some of which are deepened in colour, and their interspaces are filled in with grey so as to form a small basal band, a broad angulated belt occupying the central third of the wings, a submarginal externally zigzag stripe and an external border: primaries with a prominent black discocellular litura: body varied with grey transverse stripes and lines. Wings below grey; the outer edge of the central belt represented by a blackish stripe; prominent black discocellular spots; a diffused discal stripe with pale external edge; fringe with white basal line; costal margin of primaries white, crossed by large blackish costal spots. Body below white; legs greyish above. Expanse of wings $10\frac{1}{2}$ lines.

In the pattern of the primaries this species almost agrees with *E. excisa* (Ill. Typ. Lep. Het. iii. p. 52, pl. liii. fig. 11).

84. *Eupithecia lucinda*, n. sp. (no. 578).

Primaries pale sap-green, with blackish markings nearly as in the preceding species: secondaries sordid white, a few

scales indicating traces of transverse lines: body pale sage-green, abdomen black-spotted. Under surface shining white; primaries with a few indications of the commencement of lines upon the costa: secondaries crossed by two slender grey lines, indicating the central belt. Expanse of wings 8 lines.

Seems allied to *E. sophia* (Ill. Typ. Lep. Het. iii. p. 51, pl. liii. fig. 9).

85. *Lobophora misera*, n. sp. (no. 563).

Wings smoky brown, tinted with pink: primaries with greenish costal and internal areas; darker than the secondaries and crossed by numerous black and brown lines, the interspaces between some of which are filled with brown darker than the ground-colour, so as to form a well-defined central band; a subbasal angulated stripe, and one or two abbreviated bands and spots at apex; indications of a zigzag white submarginal line; a marginal series of black dots in pairs; fringe dark brown; a black discocellular litura: secondaries with dusky marginal line: body blackish, irrorated with grey. Under surface of wings pale reddish brown, with traces of the bands of the upper surface. Primaries with whitish internal area: body white, with blackish sides; legs banded with black. Expanse of wings 1 inch.

86. *Melanippe abraxina*, n. sp. (no. 533).

Wings snow-white, with a broad and slightly irregular dark greyish-brown outer border, traversed through the centre by a dentate-sinuate white stripe, and interrupted on second median interspaces by a marginal white spot; a black marginal line; fringe spotted with dark greyish brown. Primaries with a yellow-edged blackish spot close to the base, followed immediately by two angulated dark brown stripes; a very irregular constricted central band enclosing a black discocellular spot: secondaries greyish at base: body ochreous, covered with black spots; antennæ dark brown. Wings below with paler and more confused markings: body whitish, not spotted; abdomen transversely banded with black; legs externally black, banded with yellow, internally white and yellow. Expanse of wings 1 inch 6 lines.

87. *Larentia comis*, n. sp. (no. 528).

Greyish whity brown: primaries with the basal fourth dark brown, limited externally by a zigzag oblique white line; a broad angulated central dark brown belt, limited on both sides by zigzag white lines, and enclosing a black disco-

cellular spot; a white dentate-sinuate discal line; an interrupted blackish marginal line: secondaries rather paler than primaries, with faint indications of two arched grey discal lines: head white, antennæ brown; thorax brown, with white fringes to the tegulæ; abdomen white, with blackish dorsal dots or transverse lines. Under surface whitish; the wings slightly grey to beyond the middle, where this colour is limited by an angulated dusky stripe; blackish discocellular spots. Expanse of wings 1 inch 4 lines.

88. *Larentia inamæna*, n. sp. (no. 541).

Primaries white, crossed by numerous irregular dark brown lines; some of these are united by having their interspaces filled in with slightly paler brown, so as to produce three basal stripes and a broad irregular central belt; the two lines nearest to the outer margin become black, and the outer one expands into large white-edged spots above the third median branch; outer border grey; a marginal series of black dots in pairs; basal half and tips of fringe brown: secondaries greyish brown, pale, crossed from just before the middle to near the outer margin by parallel indistinct whitish undulated lines; marginal dots and fringe as in primaries: body brown. Under surface grey, with paler external area crossed by grey lines; black discocellular dots. Expanse of wings 1 inch 2 lines.

89. *Anticlea umbrifera*, n. sp. (no. 538).

Primaries above rust-red, traversed by numerous zigzag blackish lines, and crossed by an irregular central white belt enclosing a black discocellular dot; a series of black marginal dots in pairs; fringe tipped with grey: secondaries white, crossed by two parallel approximated blackish zigzag post-median lines; outer border reddish; marginal dots and fringe as in primaries: body above grey, varied with rust-red and whitish. Under surface sordid white: wings crossed by two grey lines; discocellular dots black. Expanse of wings 1 inch 4 lines.

90. *Scotosia sericata*, n. sp. (no. 588).

Shining bronzy grey: wings crossed by numerous zigzag and sinuated darker grey lines, three of which on the disk are filled in with reddish cupreous to form a discal band, three near the base of primaries and two close to the base to form a subbasal band and basal stripe; the central belt indicated upon the primaries by the partial filling-in of three lines on each side with brown and by black dots upon the veins: in the

secondaries the outer edge is alone indicated by black dots on the veins; a black marginal line; fringe brown: head brown, first three abdominal segments with a central black dot. Wings below shining grey, the markings obsolete; fringe brown: body grey. Expanse of wings 2 inches 1 line.

INUROIS, n. gen.

Allied to *Cheimatobia* (*C. brumata*), but the neuration utterly different. In the primaries of *Cheimatobia* the costal vein is normal, joining the costal margin at about the third fourth; in *Inurois* it unites with the subcostal vein just beyond its origin. The subcostal vein of *Cheimatobia* has four branches, all emitted at some distance from the end of the cell; that of *Inurois* has six branches, the first four of which are very short, and cross the costal area much less obliquely than is usual. In *Cheimatobia* the upper radial is trifurcate, the uppermost branch uniting with the subcostal so as to form a post-discal cell; in *Inurois* it is simple. In *Cheimatobia* the lower radial is emitted from an angle of the lower discocellular; in *Inurois* it is emitted normally from between the two discocellulars. In *Cheimatobia* these veinlets are irregular, and the upper one sloping backwards; in *Inurois* they are regular and transverse. In the secondaries the differences are nearly as striking: thus the subcostal vein of *Cheimatobia* emits its branches from a long footstalk, whilst in *Inurois* there is none; *Cheimatobia* has the discocellulars oblique and sigmoidal, the upper being about four times the length of the lower, but *Inurois* has a perfectly simple angle, with the radial emitted from the centre; in *Cheimatobia* the third median and radial are about equal distances apart, whilst in *Inurois* the second and third median branches are emitted near together and at some distance from the radial. In other respects the two genera are much alike, both in form, texture, and coloration.

Type *I. tenuis*.

91. *Inurois tenuis*, n. sp. (nos. 553 & 556).

Primaries semitransparent whity brown, with a faint indication of a slightly darker greyish broad central belt, its outer edge dotted with black upon the veins; a well-defined black discocellular spot and a marginal series of black dots: secondaries slightly paler, with black discocellular and marginal dots: body brown. Wings below with a brown discal line across both primaries and secondaries. Expanse of wings ♂ 1 inch 2 lines, ♀ 1 inch 3 lines.

92. *Cidaria mendica*, n. sp. (no. 604).

Smoky brown; wings sericeous, crossed by a very irregular white discal stripe, an indistinct series of whitish spots bounding the external area internally: primaries indistinctly striated with whity brown; a convex line of the same colour across the basal fourth; a white spot at base; a black disco-cellular spot: secondaries paler than primaries, indistinctly striated with grey: abdominal fringe whitish; external fringe of all the wings pale, tipped with white and interrupted by large dark brown spots; thorax paler than the head, collar, and abdomen. Wings below sericeous greyish brown, indistinctly mottled (particularly on the primaries) with whitish; crossed by a very irregular whitish discal line; dusky disco-cellular spots; the fringe and the costal border of primaries yellowish, spotted with dark brown: body pale greyish brown, the pectus and a number of mottled markings on the legs whity brown. Expanse of wings 1 inch 7 lines.

A very distinct but dull-looking species.

Hypenidæ.

93. *Hormisa morosa*, n. sp. (no. 1063).

Greyish brown: primaries with the interno-median area gravel-coloured and crossed by an oblique externally brown-bordered snow-white stripe, which runs from inner margin to apex; external border grey, fringe intersected and edged by dark brown lines: secondaries with a sandy tint, base of fringe gravel-coloured: abdomen with whitish posterior edges to the segments. Primaries below greyish, with a slight sandy tint, particularly on the outer border: secondaries whitish, with sandy yellowish borders and fringe: body below whitish, the venter yellowish. Expanse of wings 1 inch.

94. *Hormisa calamina*, n. sp. (no. 1064).

Primaries above pale buff, with two minute blackish dots at the angles of the cell; a submarginal series of very minute black dots; fringe brownish, becoming white at external angle: secondaries cream-coloured, with a slender marginal line and submarginal series of minute dots grey: body pale buff, the abdomen rather paler than the thorax. Under surface slightly greyer and paler than the upper, otherwise similar. Expanse of wings 1 inch.

Herminiidæ.

95. *Herminia dolosa*, n. sp. (no. 892).

Primaries above sandy brown; a slender dark brown angu-

lated line across the basal fourth, a second parallel to it just beyond the cell, and a third (nearly straight) limiting the external area; a <-shaped dusky marking at the end of the cell interrupting a dusky diffused streak which crosses the centre of the wing; a slender black marginal line: secondaries greyer than primaries, two indistinct oblique dusky lines crossing the disk, the outer one running to anal angle, where it is edged outwardly with white; a slender black marginal line. Wings below paler and more uniform in colour; primaries crossed by one blackish discal line, secondaries by two, the outer one with a pale border; a blackish marginal line. Expanse of wings 1 inch 2 lines.

96. *Herminia helva*, n. sp. (no. 915).

Pale stramineous, speckled with brown; primaries crossed by two very slender and irregular brown lines, representing the central belt and enclosing a dark brown discocellular dot; an oblique dark brown line, bounded on each side by a diffused brownish indistinct stripe from external angle to apex; a black marginal line: secondaries with whitish costal half, the two usual whitish-bordered oblique discal lines; a marginal black line. Under surface more uniform in tint, the markings very indistinct, the innermost line of primaries obsolete. Expanse of wings 1 inch 4 lines.

97. *Bleptina onerata*, n. sp. (no. 930).

Primaries above shining chocolate-brown; the base, a broad belt just before the middle, a costal spot immediately beyond it, and the outer margin densely irrorated with white scales; a discocellular spot and a marginal series black; fringe greyish brown, spotted at the base with darker brown: secondaries shining greyish brown, darker towards outer margin, fringe with a dark basal line: thorax bronze-brown, mottled with white; abdomen white, transversely banded with blackish. Wings below shining grey; fringe spotted with whitish; a white costal spot beyond the cell of primaries: body below white; legs above blackish, banded with white. Expanse of wings 1 inch.

98. *Locastra amica*, n. sp. (no. 933).

Primaries with the basal third sordid buff, speckled with black; central third white, slightly speckled and broadly bordered with black, the outer border being biangulated or zigzag; two small black spots (the outer one lunate), indicating the discoidal spots; external third copper-brown, clouded near apex and external angle with blackish; a mar-

ginal series of black spots; fringe pale, spotted with blackish: secondaries pearly hyaline white; a dot at the superior angle of the cell, and a broad external border blackish: thorax coppery brown, varied with black, whitish behind; abdomen white, speckled with black, and with the basal and anal segments dark brown. Wings below white, external area broadly tinted with brown; crossed by a series of diffused dark brown subconfluent spots, and limited within by an angulated series of subconfluent blackish spots: a blackish discocellular dot on each wing: primaries with the costa brownish, the base appearing grey from transparency; the internal border silvery: pectus and legs pale shining brown, anterior coxæ and palpi black; venter white, with blackish anus. Expanse of wings 1 inch 5 lines.

99. *Locastra inimica*, n. sp. (no. 932).

Primaries fuliginous brown, mottled with whity brown, the external area tinted with pink; a blackish oblique streak across the basal fourth; a blackish rhomboidal costal spot which crosses the cell just beyond the middle; a blackish discal zigzag series of spots across the disk just beyond the cell; a nebulous subapical patch and a marginal series of black spots; fringe grey, dark at base: secondaries sordid white, the apical area, outer margin, and a submarginal streak dark brown; a longitudinal blackish streak on first median, and a second on the submedian vein: body fuliginous brown. Wings below pearly white, becoming sordid towards outer margin and on costal border; discocellulars dusky; a subangulated blackish discal line, and a large blackish subapical patch on each wing; a marginal series of blackish spots: body white. Expanse of wings 1 inch 1 line.

100. *Bocana incongruens*, n. sp. (no. 904).

Fuliginous brown, tinted with lilacine; wings crossed by two broad dark brown parallel oblique stripes, the first central, the second discal; fringe grey; primaries with a small yellow discocellular crescent. Under surface greyish brown: wings with small discocellular white dots; secondaries with indication of a discal line slightly darker than the ground-colour. Expanse of wings 1 inch 3 lines.

TROTOSEMA, n. gen.

Allied to *Echana*; palpi shorter, recurved, and pressed close over the front of the head; wings rather short and broad, primaries with a pouch-like tuft of overlapping curly hair on the costal margin beyond the cell. Type *T. sordidum*.

101. *Trotosema sordidum*, n. sp. (no. 905).

Smoky brown: wings crossed by two dusky diffused stripes, the first central, the second (with defined sinuated outer edge) limiting the external border; a series of black marginal dots: primaries with black discoidal spots, both very small. Wings below irrorated with whitish brown; two irregular sinuous dusky-bordered whitish discal lines; black discocellular spots and blackish marginal dots. Expanse of wings 1 inch 3 lines.

CIDARIPLURA, n. gen.

Allied to *Edessena*, but differing in its enormous compressed sabre-like palpi; first palpal joint 4 millims. in length, curved upwards at the base, gradually expanding but straight from near the base to the crown; second joint $4\frac{1}{2}$ millims. in length, placed at right angles to the first, narrow at base, slightly widening towards the crown, thickly fringed with hair internally; third joint $4\frac{1}{2}$ millims. in length, narrow at base, gradually tapering to a point at apex, slightly incurved and fringed internally with hair. Primaries acuminate, with arched outer margin. Type *C. gladiata*.

102. *Cidariplura gladiata*, n. sp. (no. 902).

Smoky brown: wings crossed by a white-edged dark brown discal line; a black marginal line: primaries with a white reniform spot and a very minute white orbicular dot. Under surface paler; wings with an ill-defined dusky discal line and blackish discocellular spots. Expanse of wings 1 inch 4 lines.

103. *Amblygoes albinotata*, n. sp. (no. 921).

Primaries bronzy brown, with grey external border; two nearly central parallel stripes, slightly darker than the ground-colour, and terminating upon the costa in reversed snow-white spots; a subapical costal white dot or slender transverse dash; a lunular orange discocellular spot: secondaries dull copper-brown, with grey outer border, separated from the ground-colour by a scarcely perceptibly darker diffused band: thorax bronze-brown; abdomen grey. Under surface greyish brown: primaries with the costa bronze-brown, interrupted by a marginal short white line near the base, an oblique dash beyond the cell, and a slender subapical line parallel to the outer margin; outer border irrorated with white scales; a slender blackish marginal line: secondaries irrorated with white scales; a whitish submarginal line; a slender black marginal line: legs brown, tarsi banded with white. Expanse of wings 1 inch 2 lines

104. *Egnasia argillacea*, n. sp. (no. 954).

Reddish clay-colour, speckled with grey; a marginal series of minute black dots followed by little transverse white lines; fringe rosy, traversed by basal and central lake-red lines; a pale-edged brown discal line just beyond the discoidal cells, followed by a diffused indistinct greyish belt: primaries crossed near the basal third by a pale-edged brown line parallel to the discal one; costal border sericeous, crossed by two or three white dashes and with black marginal dots: thorax and abdomen dusky. Wings below pale greyish brown; markings indistinct: body white, legs yellowish. Expanse of wings 10 lines.

105. *Egnasia fallax*, n. sp. (no. 917).

Primaries above whitish olivaceous, indications of an arched central band, dusky upon inner margin, and bounded externally by a series of minute blackish dots; three parallel indistinct greyish arched lines across the basal third, the innermost line dotted with blackish; a very irregular grey discal line; a marginal series of black dots; fringe grey; costal margin pale buff, spotted with blackish: secondaries grey: thorax whitish olivaceous; abdomen slightly greyer, with pale margins to the segments. Primaries below sericeous greyish, with pale borders and dark fringe; costal border buff, crossed beyond the cell by an abbreviated oblique dusky line: secondaries sandy yellowish, speckled with grey; two indistinct parallel arched discal lines; a black discocellular dot. Body below golden whitish, shining; legs paler. Expanse of wings 10 lines.

106. *Egnasia erebina*, n. sp. (no. 927).

Smoky brown, with the external area broadly darker and limited internally by a sinuated black stripe or band; a pale-edged blackish line limiting the external border; a marginal series of small blackish spots enclosing white semicircular lines; fringe spotted with blackish; centre of the wings occupied by little variously formed hyaline white characters: primaries crossed at basal fourth by an irregular series of about four black spots; a black costal spot close to the base: thorax smoky brown, abdomen greyish. Under surface greyish; the basal area speckled with white; the discal lines with pale edges; the sinuated stripe of the upper surface forming the inner discal line more regular than above and dentate-sinuate throughout; the hyaline white markings more distinct and black-edged; marginal spots represented by subconfluent de-

pressed triangular blackish dots followed by a slender whitish line. Primaries without basal markings: body whitish, with the legs greyish. Expanse of wings 11 lines.

107. *Egnasia opalina*, n. sp. (no. 895).

Primaries strongly angulated; pearly grey, with brownish costal margin and fringe; two diverging transverse central orange-margined ferruginous lines: secondaries pale brown; a dusky marginal line, followed by a whitish line at the base of the fringe: body pale brown. Under surface sericeous whity brown: primaries with faint traces of a darker transverse discal line. Expanse of wings 1 inch.

Pyralidæ.

DEANA (*Adena*, Wlk., nec *Hadena*, Guén.).

108. *Deana sericea*, n. sp. (no. 1042).

Sericeous greyish brown; a slightly darker discal angulated line, partly bordered outwardly with whitish; fringe cream-coloured, traversed near the base by a black line, white at the anal angles, and with a black patch at the angulation of the outer margins: primaries with the costal border cream-coloured beyond the middle; a pale-bordered dusky line across the basal fourth; a large white spot immediately beyond the discocellulars, which are blackish and <-shaped: secondaries with a pale spot beyond the discocellulars: frons silvery white, palpi blackish, antennæ testaceous. Wings below paler and more sericeous, the discal line well defined, with better-marked whitish border; the spots beyond the cells white on all the wings; the primaries without basal transverse line; body below silvery white. Expanse of wings 1 inch.

Walker refers his genus to the *Crambites*, remarking at the same time that it hardly belongs to that group. His type (*A. xanthialis*) is identical with a species doubtfully referred by him to the genus *Scopula* under the name of *S. ? hybrealis*.

109. *Pyralis valida*, n. sp. (no. 938).

Greyish brown, with a slight cupreous reflection; wings crossed by two stramineous lines, those of primaries much wider apart and more angular than those of secondaries, fringe bright stramineous black at base: primaries with the apical two thirds of the fringe tipped with black; centre of costal margin spotted with yellow, apical portion blackish; a blackish dot at the end of the cell. Wings below shining, the inner

stramineous line obsolete; basal two thirds of costal margin of primaries stramineous, spotted with black; anal angle of secondaries occupied by a diffused subquadrate stramineous patch: legs pale yellowish. Expanse of wings 1 inch 1 line.

Allied to *P. rubidalis* of Europe.

110. *Pyralis yokohamæ*, n. sp. (no. 939).

Primaries above greyish brown, with a feeble rosy reflection, crossed by two widely separated parallel slender stramineous lines; fringe pale brown, with a dusky subbasal line: secondaries pale brown, crossed by two slender whitish lines, the inner one angulated, the outer one arched; fringe as in primaries: thorax coloured like the primaries; abdomen pale brown, with a pink reflection. Wings below stramineous, with a paler discal line across the wings: secondaries whitish towards the abdominal border. Expanse of wings 1 inch 1 line.

111. *Pyralis regina*, n. sp. (no. 942).

Primaries above shining purple, with faint indications of two widely separated paler lines, the outer one commencing in a well-marked golden-yellow costal dash; centre of costal margin minutely flecked with gold; fringe golden-yellow, with a basal lake-red line: secondaries lake-red, with purple outer border; two irregular yellow-edged central blackish lines; fringe as in primaries: body brown, with purplish reflections. Under surface shining grey; wings with stramineous fringe, slightly rosy at base; a yellow costal dash as above; basal two thirds of costal margin flecked with yellow: secondaries whitish towards the base; a diffused rose-red discal belt enclosing an arched yellow-edged blackish line: legs and venter silvery. Expanse of wings 8 lines.

Near to *P. lucillalis* of Walker.

112. *Doththa consocia*, n. sp. (no. 950).

Wings above reddish cupreous, with the basal third laky brown, edged externally by a silvery-white line; basal half of fringe shining pink, bounded on each side by a black line, external half silvery white: primaries with an internally pale-edged slender black submarginal line; outer border rosy; internal area immediately beyond the subbasal line whitish: secondaries with a nearly central blackish-bordered white line: body pale brown. Wings below shining rose-red, with fringe as above: primaries with a large subapical patch and the costa clay-coloured; a number of black-edged white costal

spots; a discocellular black lunule; a blackish patch below the end of the cell, and another below the clay-coloured patch, and enclosed by a forked black-edged white line, the outer or main stem of which replaces the submarginal line of the upper surface: secondaries crossed at basal third by a diffused constricted whitish belt enclosing an irregular black line, and followed by a deep-reddish discocellular dot; a black-bordered angulated white discal line; body below whitish brown, anterior coxæ rose-red. Expanse of wings 11 lines.

Allied to *D. icelusalis* (*Pyralis icelusalis* of Walker).

Asopiidæ.

113. *Samea commixta*, n. sp. (no. 965).

Wings above with the basal two thirds stramineous, varied with white: primaries with two black dots at base, two large dark brown spots close to base, followed by an irregular belt of the same colour almost crossing the wing; a blackish-bordered stramineous quadrangle spot at the end of the cell; an irregularly angulated pale-bordered black discal line limiting the external third, which is dark brown, a marginal series of black dots; fringe stramineous, with central and terminal blackish lines: secondaries crossed by two irregular black lines; external area and fringe as in primaries: body whitish brown, abdomen banded with blackish. Under surface whitish brown, markings very indistinct. Expanse of wings 9 lines.

Allied to *Samea inscitalis* (*Ædiodes inscitalis* of Walker).

114. *Samea exigua*, n. sp. (no. 1032).

Wings cream-coloured, with very pale cupreous-brown outer border, bounded internally by a dusky line; fringe grey, with white and blackish basal lines; two central dusky lines, the outer one almost sigmoidal (but angular) upon the primaries, straight and uniting with the submarginal line on secondaries; costal area of primaries brownish: body cream-coloured, brown in front; anus yellow. Under surface white, markings as above, but all grey. Expanse of wings 7 lines.

Margarodidæ.

115. *Glyphodes Pryeri*, n. sp. (no. 989).

Very like *G. pyloalis* of North China (*G. sylpharis* of Japan), but larger, the white areas sordid, the bands broader, duller, and connected upon the inner margin of primaries: secondaries crossed by a central bisinuated dark brown stripe;

lower discocellular covered by a cuneiform black spot. Expanse of wings 1 inch.

The type of Walker's *G. pyloalis* is in such poor condition, being much rubbed and destitute of fringe to the wings, that it is no wonder that I did not at first recognize its specific identity with the fresh and nearly perfect example obtained by Mr. Jonas.

116. *Margaronia inusitata*, n. sp. (no. 983).

Snow-white, sericeous: wings crossed by a sinuous discal greyish-brown line; three black-edged pale copper-brown discoidal spots confluent with the costal border, which is also pale copper-brown; a fourth spot below the cell: secondaries with a black-edged small spot in the cell, and a larger one closing the cell: frons yellow; palpi black; shoulders red-brown. Under surface with the markings much less distinct, partly obsolete. Expanse of wings 11 lines.

Nearest in appearance to *Cirrhochrista brizoalis*, but very distinct in form.

Botididæ.

117. *Mecyna prunipennis*, n. sp. (no. 1024).

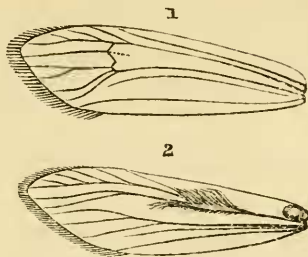
Primaries above reddish brown, tinted with plum-colour; a greyish spot at the end of the cell: secondaries sordid ochreous, with a grey external border: thorax plum-coloured; abdomen testaceous. Under surface ochreous; wings with rose-coloured tips; primaries with an oblique brown dash at the end of the cell, fringe brown; legs whitish, the femora clouded with rose-colour. Expanse of wings 1 inch 4 lines.

Phycidæ.

PARALIPSA, n. gen.

Aspect of *Achroëa*; allied to *Alipsa*, from which it scarcely differs in the neuration of the secondaries; but the structure of the primaries is altogether distinct, that of *Alipsa* being very simple, the costal vein simple, terminating at about second third of costa, the subcostal four-branched, the cell very long, the discocellulars forming a transverse zigzag line, from the uppermost angle of which the upper radial is emitted, and from the lowest the third median and lower radial are emitted upon a long footstalk, the first and second median being emitted near together from the inferior extremity of the cell, and being distinctly curved, the median vein is slightly inarched, as well as the vein-like fold immediately below it, and the submedian is long. In *Paralipsa* the base of the

costal border is swollen out into a bladder-like excrescence, the costal vein (so far as can be seen without actually destroy-



Neuration of (1) *Alipsa* and (2) *Paralipsa*.

ing the specimen) appears to spring from near the base of the subcostal, and both of these veins almost immediately pass under a long depressed mass of hair-scales, from which they emerge just about the centre of the wing, the costal vein passing obliquely upwards to the margin, and the subcostal throwing off the first of its five branches parallel to it; parallel to and below the subcostal is an arched vein, from which both the radials are emitted; the discocellulars are absent; and the median vein, which is normal in structure, curves slightly upwards towards the radials; the false vein below the median curves slightly downwards at its extremity; the submedian is decidedly shorter than in *Alipsa*: the principal difference in the secondaries is that the second and third median branches are unusually short, little more than half the length of those in *Alipsa*: the palpi are unfortunately absent; but in other respects the body is similar. Type *P. modesta*.

118. *Paralipsa modesta*, n. sp. (no. 1170).

Coloration of *Alipsa angustella*: primaries above lilac-grey, speckled with black, and with a central forked pale ferruginous streak, a minute black subbasal dash, and a rounded black subcostal spot at apical third: secondaries sericeous white, with diffused dusky outer border, most distinct at apex: thorax lilacine grey; abdomen testaceous, with a pearly lustre. Under surface sordid white, the primaries with dusky external fourth. Expanse of wings 10 lines.

Crambidæ.

119. *Crambus sabulinus*, n. sp. (no. 1110).

Primaries red-brown, with a lilac reflection; costal border white; a band of clay-colour across the basal third, its inner

half formed of large embossed scales, its inner margin limited by a diffused transverse greyish stripe: secondaries sordid hyaline white, with brown veins and margins; fringe traversed by a brown line: thorax shining clay-colour; abdomen testaceous. Under surface shining, the primaries and body stramineous, the secondaries whitish, with testaceous veins and margins. Expanse of wings 11 lines.

120. *Crambus yokohamæ*, n. sp. (no. 1087).

Primaries above bright golden yellow; discoidal area bright silver; a black line starting from the base of costa running to near the end of the upper radial, and there uniting with a second line starting from the base of the median vein, thus enclosing the basal half of the costal border and the discoidal area; three black-dotted longitudinal silver streaks upon the median branches, the third being almost obliterated by a large, oblique, pearly white spot; a fourth silver streak on interno-median interspace, and a fourth abbreviated one just below the subcostal vein beyond the end of the cell; a cuneiform, pearly white costal patch, bounded internally by an oblique abbreviated black line; a partly blackish-edged angular discal line; a silver triangular character filling the angle of the apex and edged internally with black, below it five black marginal dots; fringe white: secondaries sordid white, with greyish diffused outer border and silvery-white fringe: thorax golden yellow, with metallic cupreous tegulæ; abdomen pale yellowish. Wings below greyish brown, with whitish outer borders: secondaries paler than primaries, whitish towards abdominal margin. Body below whitish. Expanse of wings 1 inch 1 line.

121. *Crambus vicens*, n. sp. (no. 1088).

Primaries above satiny white, with incurved, metallic, silver fringe; several variously shaped black-bordered pearly white dots and lituræ on the internal and interno-median areas, the best-marked indicating part of a central band, the upper portion of which is indicated by two parallel, irregular, macular greyish lines; discoidal cell and the disk beyond it speckled with scattered black scales; two curved, parallel, approximated, golden-brown discal lines, a spot of the same colour, speckled with black, close to apex; a greyish submarginal line; three nearly marginal black dots, followed by a very slender black marginal line: secondaries creamy white, fringe silky white: thorax white; abdomen cream-coloured. Wings below cream-coloured: primaries suffused with

brownish grey; fringe satiny white; three submarginal black dots: body below white. Expanse of wings 11 lines.

122. *Apurima lineata*, n. sp. (no. 960).

Primaries creamy white, streaked here and there longitudinally with pale golden brownish, and crossed from inner margin to apex by a golden-brown stripe; a black spot at the origin of the second and third median branches: secondaries, body, and under surface of the entire insect satiny white. Expanse of wings 1 inch 1 line.

Tortricidæ.

In a collection obtained in 1867 and collected by Mr. Whitely in Hakodaté, was an example of *Penthina arcuella*, Clerck, not differing in any respect from European specimens. This species was accompanied by one of the *Tineina*, which evidently mimics it in Japan, being so like it as, at first sight, to have deceived several experienced Lepidopterists.

Gelechiidæ.

123. *Gelechia imogena*, n. sp.

Basal third of primaries opaline; two divergent, golden orange, basal dashes; a straight transverse orange band limiting the opaline area externally, its outer edge bisinuated, the lower sinuation receiving the inner extremity of an elongated black patch, which fills up the remainder of the internal area; this patch is interrupted by irregular lines of shining amethystine and orange scales, and is bounded above by a diffused pale yellow border; above the black patch the ground-tint of the wings is whity brown, irrorated with dark brown, and bounded externally by a broad, shining, golden belt enclosing an amethyst-coloured stripe; a blackish-edged submarginal stripe tapering towards the external angle, its upper portion pearly white, its lower portion amethystine; outer border and internal fringe golden orange; external fringe dark brown, with plumbaginous lustre: secondaries bronzy brown; fringe very long and interrupted by longitudinal paler streaks: body dark brown; tegulæ orange, with plumbaginous internal fringe. Primaries below shining brown; secondaries shining grey: body brownish, with whitish legs, the tarsi above with blackish bars. Expanse of wings 9 lines.

Hakodaté (*Whitely*).

This species, although far more gorgeous in colouring when seen through a lens, bears a remarkable general resemblance to *Penthina arcuella*.